• N/A



A B

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/256,156A

DATE: 06/30/1999 TIME: 16:57:39

Input Set: I256156A.RAW

This Raw Listing contains the General Information Section and up to first 5 pages.

													N	T)		fle?	
	1	<110>	APPI	LICA	NT: (GILL	IES,	Ste	phen	D			. I V		- N	9 8		11 ^c	
	2		LO,	Kin	-Min	3												V	
	3		LAN	, Ya	n.														
	4		WES	DLOW	SKI,	Joh	n												
	5	<120>					ION:	Enh	anci	ng ti	he C	ircu	lati	ng H	alf-	life	of i	Antiboo	ly-based
	6		Fus:	ion :	Prote	eins													
	7	<130>	FILE	E RE	FERE	NCE:	LEX	-003											
	8	<140>									09/2	56,1	56A						
•	9	<141>	CURI	RENT	FIL:	ING I	DATE	: 19	99-0	2-24									
	10	<150>	EARI	LIER	APP	LICA'	TION	NUM	BER:	US (60/0'	75,8	87						
	11	<151>	EARI	LIER	FIL:	ING I	DATE	: 19	98-0:	2-25									
	12	<160>	NUM	BER (OF SI	EQ I	D NO	S: 8											
	13	<170>	SOFT	[WAR]	E: Pa	aten	tIn '	Ver.	2.0										
	14	<210>	SEQ	ID 1	10 1														
	15	<211>	LENGTH: 447																
	16	<212>	TYPE	E: Pl	RT														
	17	<213>	ORG	MISI	M: H	omo :	sapi	ens											
		<220>																	
	19	<223>	OTHE	ER II	VFORI	ITAN	ON:	IGG-:	1 CH	AIN (CRE	GION							
	20	<220>	FEA?	TURE	:											•			
		<221>																	
	22	<222>	2> LOCATION: (1)(117)																
	23	<223>	OTHE	ER II	VFORI)ITAN	ON: S	The 2	Kaa a	at po	osit:	ions	1 to	11'	7 are	e noi	1-C01	nserved	L
	24		amir	o a	cids														
	25	<400>	SEQU	JENCI	E: 1														
W>	26		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
	27		1				5					10					15		
W>	28		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
	29					20					25					30			
W>	30		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
	31				35					40					45				
W>	32		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
\bigvee_{i}	33			50					55					60					
M- f > /	34		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
O.	35		65					70					75					80	
W>	36		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	*
	37																95		
M>	38		Xaa	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
	39					100					105					110			
₩>	40		Xaa	Xaa		Xaa	Xaa	Ala	Ser		Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	
	41		_		115					120	_	_	_	_	125		_		
	42		Ala		Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr		Ala	Leu	Gly	Cys	
	43			130					135			_		140					
	44		Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	

APR 13 20.

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/256,156A

DATE: 16:57:39

Input Set: I256156A.RAW

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys <210> SEQ ID NO 2 <211> LENGTH: 443 <212> TYPE: PRT <213> ORGANISM: Homo sapiens <220> FEATURE: <223> OTHER INFORMATION: IGG-2 CHAIN C REGION <220> FEATURE: <221> NAME/KEY: VARIANT <222> LOCATION: (1)..(117) <223> OTHER INFORMATION: The Xaa at positions 1 to 117 are non-conserved amino acids <400> SEQUENCE: 2

M--> OL, 3

PAGE:

DATE: 06/30/1999 TIME: 16:57:39 PAGE: 3 RAW SEQUENCE LISTING

PATENT APPLICATION US/09/256,156A

Input Set: 1256156A.RAW

	0.5	_				_											
100	95	1		W	v	5	 -	W	W	 .	10		w	V	V	15	V.
W>	96	xaa	xaa	xaa	xaa 20	хаа	хаа	xaa	хаа	жаа 25	Xaa	xaa	хаа	хаа	30	хаа	хаа
W>	97 98	Vaa	Yaa	Vaa		Vaa	Yaa	Vaa	Yaa		Xaa	Yaa	Yaa	Vaa		Vaa	Yaa
W>	99	Add	Aaa	35	Add	Add	Aaa	Add	40	Add	Add	Add	Add	45	naa	Add	Add
W>	100	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa		Хаа	Xaa	Xaa	Xaa		Xaa	Xaa	Xaa
	101		50				1144	55		1144			60				
w- A	102	Xaa		Xaa	Xaa	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa
O.A.	103	65					.70					75					80
W>	104	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	105					85					90					95	
W>	106	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	107				100					105					110		
W>	108	Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu
	109			115		•		*	120					125			
	110	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Glu	Ser	Thr	Ala	Ala	Leu	Gly	Cys
	111		130					135					140				
	112	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	\mathtt{Trp}	Asn	Ser
	113	145					150					155					160
	114	Gly	Ala	Leu	Thr		Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser
	115		_			165				_	170	_	_			175	
	116	Ser	Gly	Leu	_		Leu	Ser	Ser		Val	Thr	Val	Pro		Ser	Asn
	117			_1	180		_		_	185		_		_	190	_	_
	118	Phe	GIA		GIn	Thr	Tyr	Thr	_	Asn	Val	Asp	His	_	Pro	ser	Asn
	119	m1	-	195	•			7	200		•	~	~	205	~1	~	D
	120	Thr	-	vaı	Asp	гуѕ	Thr		GIU	Arg	Lys	Cys		vaı	GIU	Cys	Pro
	121	Desc	210	D	7 J	D	Dana	215	77.	~1	D-00	000	220	Dha	T	Dha	Dwo
	122 123	225	Cys	PLO	Ala	PIO	230	val	Ата	GIY	Pro	235	vai	Pile	ьец	PHE	240
	124		Larg	Dro	Luc	Agn		T.011	Mot	Tla	Ser		Thr	Pro	Glu	Wa 1	
	125	FIO	цуз	FIO	цуз	245	1111	неи	Mec	110	250	Arg	1111	110	GIU	255	1111
	126	Cvs	Val	Val	Va1		Val	Ser	His	Glu	Asp	Pro	Glu	Val	Gln		Asn
	127	-1-			260	E				265					270		
	128	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val		Asn	Ala	Lys	Thr	Lys	Pro	Arg
	129	-	•	275	_	•			280				•	285	-		•
	130	Glu	Glu	Gln	Phe	Asn	Ser	Thr	Phe	Arg	Val	Val	Ser	Val	Leu	Thr	Val
	131																
	132	Val	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser
	133	305					310					315					320
	134	Asn	Lys	Gly	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Thr	Lys
	135					325					330					335	
	136	Gly	Gln	Pro	_	Glu	Pro	Gln	Val	_	Thr	Leu	Pro	Pro		Arg	Glu
	137				340					345					350		
	138	Glu	Met		Lys	Asn	Gln	Val		Leu	Thr	Cys	Leu		Lys	Gly	Phe
	139	_	_	355	_				360	_	~7	_	_	365	~ 1	5.	~1
	140	Tyr		ser	Asp	Ile	Ala		GLu	Trp	Glu	ser		GIY	GIn	Pro	GIu
	141	7	370	m	T	տե	mЪ	375	D	N	T	N	380	7	~ 1	O ~	nh c
	142		ASN	ryr	гÀЗ	ınr		PLO	Pro	Met	Leu	_	ser	Asp	GIĀ	ser	
	143 144	385	T ess	m~	g.~	T	390	mh~	17-7	7 .c∽	Larc	395 Ser	λ ~~ ~	Фхх	Gl ₂	Gl ~	400
	733	rile	пеп	TÅT	ser.	пλа	пеп	1111	val	wab	Lys	261	Arg	тър	GIII	GIII	GTÀ

DATE: 06/30/1999 TIME: 16:57:39 PAGE: 4 RAW SEQUENCE LISTING

PATENT APPLICATION US/09/256,156A

Input Set: 1256156A.RAW

	145						405					410					415	
	146		Asn	Val	Phe	Ser		Ser	Val	Met	His		Ala	Leu	His	Asn		Tvr
	147					420	-1-				425					430		-1-
	148		Thr	Gln	Lvs		Leu	Ser	Leu	Ser		Glv	Lvs					
	149				435					440		- 4	-					
	150	<210>	SEO	ID I														
	151	<211>	_									•						
	152	<212>																
	153	<213>				omo :	sapi	ens										
	154	<220>																
	155	<223>				TTAN	ON:	IGG-	3 CH/	AIN (C REC	GION						
	156	<220>																
	157	<221>		_		ARTAI	VТ											
	158	<222>)										
	159							_	Xaa a	at po	osit	ions	1 t.	o 11'	7 are	nor	1-cor	served
	160	1000		no ao						P								
	161	<400>																
W>	162	1200				Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	163		1				5					10					15	
W>	164			Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa		Xaa
	165					20					25					30		
W>	166		Xaa	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
•	167				35					40					45			
W> /1	168		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
NC	169			50					55					60				
W- \$\sqrt{\sq}}\sqrt{\sq}}}}}}}}\sqrt{\sqrt{\sq}}\sqrt{\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	170		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	171		65					70					75					80
W>	172		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	173						85					90					95	
W>	174		Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	175					100					105					110		
W>	176		Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu
	177				115		•			120	_				125			
	178		Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys
	179			130					135					140				
	180		Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser
	181		145					150					155					160
	182		Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	${\tt Pro}$	Ala	Val	Leu	Gln	Ser
	183						165					170					175	
	184		Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser
	185					180					185					190		
	186		Leu	Gly	Thr	Gln	Thr	Tyr	Thr	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn
	187				195					200					205			
	188		Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Leu	Lys	Thr	Pro	Leu	Gly	Asp	Thr
	189			210					215					220				
	190		Thr	His	Thr	Cys	Pro	Arg	Cys	Pro	Glu	Pro	Lys	Ser	Cys	Asp	Thr	Pro
	191		225					230					235					240
	192		Pro	Pro	Cys	Pro	Arg	Cys	Pro	Glu	Pro	Lys	Ser	Cys	Asp	Thr	Pro	Pro
	193						245					250					255	
	194		Pro	Cys	Pro	Arg	Cys	Pro	Glu	Pro	Lys	Ser	Cys	Asp	Thr	Pro	Pro	Pro

DATE: 06/30/1999 RAW SEQUENCE LISTING PAGE: TIME: 16:57:39

PATENT APPLICATION US/09/256,156A

Input Set: I256156A.RAW

```
260
                                       265
                                                         270
 195
            Cys Pro Arg Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
 196
 197
                                    280
            Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 1.98
                                295
                                                  300
 199
            Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 200
                             310
                                              315
 201
            Gln Phe Lys Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 202
 203
                                           330
            Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Phe Arg Val Val Ser Val
 204
 205
                      340
            Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 206
 207
                                    360
 208
            Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 209
                                375
            Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 210
                                              395
                             390
 211
            Ser Arq Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 212
 213
                                           410
 214
            Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly
 215
                                       425
                      420
            Gln Pro Glu Asn Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp
 216
                                    440
                                                     445
 217
            Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 218
 219
                                455
 220
            Gln Gln Gly Asn Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His
 221
                             470
                                              475
 222
            Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 223
                         485
                                           490
 224
      <210> SEQ ID NO 4
 225
      <211> LENGTH: 444
 226
       <212> TYPE: PRT
 227
      <213> ORGANISM: Homo sapiens
 228
      <220> FEATURE:
 229
      <223> OTHER INFORMATION: IGG-4 CHAIN C REGION
 230
      <220> FEATURE:
 231
      <221> NAME/KEY: VARIANT
 232
      <222> LOCATION: (1)..(117)
      <223> OTHER INFORMATION: The Xaa at positions 1 to 117 are non-conserved
 233
 234
            amino acids
      <400> SEQUENCE: 4
 235
 236
            237
                                            10
 238
            239
                       20
                                        25
 240
            241
                                     40
 242
            243
                                 55
           244
Please Note:
```

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing t ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

PAGE: 6

VERIFICATION SUMMARY PATENT APPLICATION US/09/256,156A

DATE: 06/30/1999 TIME: 16:57:39

Input Set: I256156A.RAW

Line	?	Error/Warning							ginal	l Te	¢τ							
	- 141			·	naod.	Posture	required	Vaa	Vaa	Yaa	Yaa	Yaa	Yaa	Yaa	Yaa	Yaa	Xaa	
																	Xaa	
							required										Xaa	
							required										Xaa	
					_		required											
							required										Xaa	
							required										Xaa	
							required										Xaa	
							required										Gly	
							required										Xaa	
96	W	"N"	or	"Xaa"	used:	Feature	required		-								Xaa	
98	W	"N"	or	"Xaa"	used:	Feature	required										Xaa	
100	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
102	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	X
104	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	X
106	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	X
108	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Ser	Thr	Lys	Gly	Ρ
162	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	X
164	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
166	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
168	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
170	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
172	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	X
174	W	"N"	or	"Xaa"	used:	Feature	required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
							required	Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Ser	Thr	Lys	Gly	P
							required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
							required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
							required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Х
							required	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	х
				-			required										Xaa	
					_		required										Xaa	
							required										Xaa	
							required										Gly	
200	74	TA	\mathcal{I}	naa	useu:	- Gacure	rcgurrcu	2200								_, _	1	_